State of Alaska
FY2003 Governor's Operating Budget

Department of Environmental Conservation
Facility Construction and Operations
BRU/Component Budget Summary

BRU/Component: Facility Construction and Operations

(There is only one component in this BRU. To reduce duplicate information, we did not print a separate BRU section.)

Contact: Dan Easton, Director

Tel: (907) 465-5135 **Fax:** (907) 465-5177 **E-mail:** deaston@envircon.state.ak.us

Component Mission

Assist communities in improving sanitation conditions.

Component Services Provided

Provide grants, loans and engineering assistance for water, sewerage, and solid waste facilities.
- Develop training programs for and certify water and sewerage system operators.
- Provide over-the-shoulder and emergency assistance to system operators in remote communities.
-

Component Goals and Strategies

REDUCE THE NUMBER OF HOUSEHOLDS WITHOUT ACCESS TO ADEQUATE SANITATION FACILITIES.

Secure approximately 60 million in federal grant funds on behalf of the communities.
- Solicit applications and make approximately 67 million in grants to communities for more than 70 sanitation facility
- projects in rural communities on a priority public health need basis.

Work directly with communities to plan systems that can be operated and maintained locally.
- As agent for communities, manage private companies developing designs and supervising construction.
- Approve and track the expenditure of state and federal grant funds.
-

ASSIST COMMUNITIES IN CONSTRUCTING WATER, SEWERAGE AND SOLID WASTE FACILITIES.

Secure approximately 16 million in federal grant funds and deposit into accounts for loan to communities.
- Solicit applications and make low-interest loans to community- and certain privately-owned utilities for drinking water
- and wastewater projects.

Make approximately 23 million in grants (requiring a local match) and 19 million in loans to communities on a priority
- public health need basis.

Approve and track the expenditure of state and federal grant and loan funds.
-

PROVIDE ASSISTANCE TO COMMUNITY WATER AND SEWERAGE SYSTEM OPERATORS.

Secure approximately 1.3 million in federal grant funding for this program.
- Provide, via contracts with regional Native health corporations, 13 Remote Maintenance Workers to travel routinely to
- and assist water and sewer operators in 150 small communities across the state.

Provide direct Remote Maintenance Worker assistance to 10 additional communities where services cannot be
- provided through regional Native health corporations.

Prevent catastrophic failure and loss of any water and sewerage systems.
-

TRAIN AND CERTIFY WATER AND WASTEWATER SYSTEM OPERATORS.

Train and certify operators of 650 small drinking water systems as required by changes in federal law.
- Develop and improve operator training curricula for use by private companies and the university system.
- Maintain a lending library of training materials.
- Administer 800 operator certification examinations.
- Receive and evaluate applications for certification, issue certificates, and maintain a database of 1,100 certified
- operators.

Staff the Water and Wastewater Works Advisory Board which adjudicates certification decisions and develops
- recommendations on policy matters.

Key Component Issues for FY2002 – 2003

RURAL SANITATION. Progress towards developing basic, but safe, water and sewerage systems in rural communities -

"putting the honey bucket in the museum" - will remain a top priority. Availability of an additional 9 million in federal funds in FY2003 will allow funding of additional projects and result in a small, but real, increase in construction pace and progress.

Major Component Accomplishments in 2001

MUNICIPAL WATER, SEWERAGE AND SOLID WASTE MATCHING GRANTS PROGRAM

- Awarded a total of 19.4 million in state and federally-funded matching grants to 22 communities for 47 water, wastewater and solid waste projects. The total local contribution was 12.8 million.

MUNICIPAL LOANS PROGRAM

- Awarded 16.7 million in new, low-interest loans to 7 communities for 15 water, wastewater and solid waste projects.
- Secured 15.8 million in federal funding to add to loan account capital.
- Collected 13.5 million in loan principal and interest for deposit into the loan funds.
-

VILLAGE SAFE WATER PROGRAM

- Secured 39.8 million in federal Environmental Protection Agency and US Department of Agriculture-Rural Development grant funding for the program.
- Awarded 52.9 million in grants for 69 water, wastewater and solid waste projects.
- Continued to work toward the goal of providing access to adequate sanitation services to rural communities. As of
- FY 2001 sixty-nine percent of all rural Alaskan households had access to running water and sewer.

REMOTE MAINTENANCE WORKER PROGRAM

- Due, in part, to remote maintenance worker assistance, there have been no catastrophic system failures since 1989.
- Provided regular over-the-shoulder operator assistance to 171 communities.
-

OPERATOR CERTIFICATION PROGRAM

- Administered two statewide operator certification examinations to over 310 applicants where approximately 215 examinees attained certification or upgraded their existing certifications.
- Administered 35 special entry-level operator certification examinations with approximately 200 village operators receiving training, 130 of which achieved entry-level certifications.

Statutory and Regulatory Authority

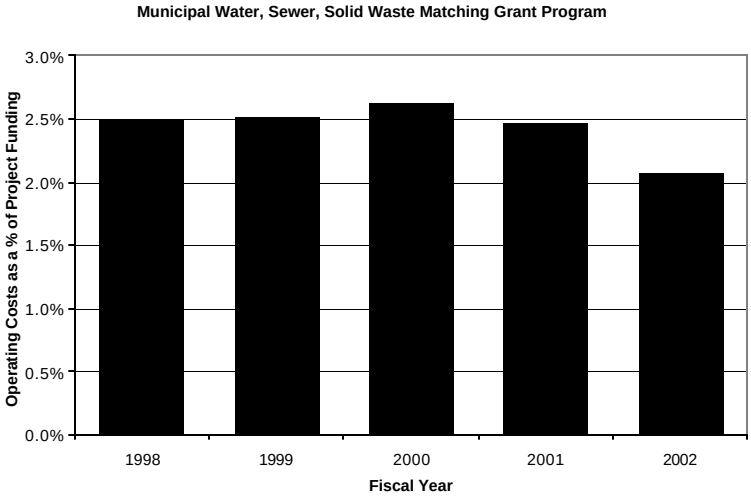
AS 46.03.030, AS 46.03.032, AS 46.03.036, AS 46.07, AS 46.30, 18 AAC 73, 18 AAC 74, 18 AAC 76, 18 AAC 77

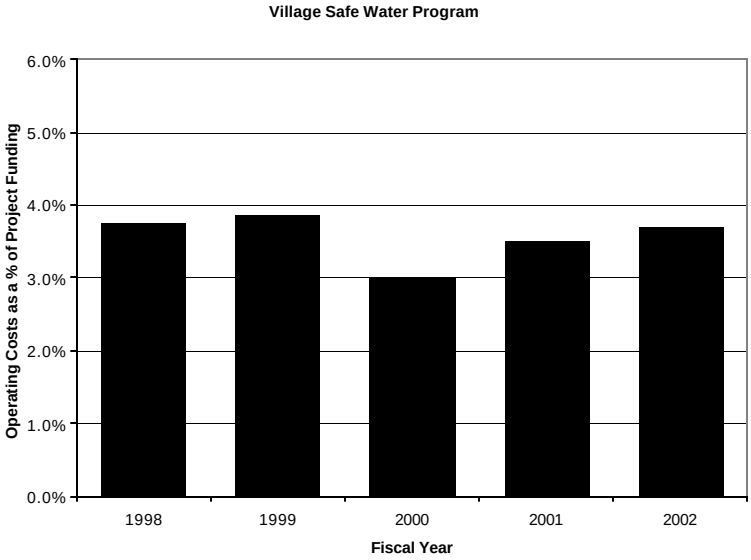
Key Performance Measures for FY2003

Measure:
The agency operating costs per sanitation project.
Sec 67 Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:
The goal of the Division of Facility Construction and Operation is to manage operating costs -- expressed as a percentage of capital project funding -- at 4 percent, or less. The division continues to meet this goal in both the Village Safe Water and Municipal Water, Sewerage and Solid Waste Matching Grant programs.

Between 1998 and 2002, operating costs for Municipal Water, Sewerage and Solid Waste Matching Grant projects varied between 2.1 and 2.6% of project funding. Operating costs for Village Safe Water projects ranged from 3.5 to 3.9% of project funding.





Benchmark Comparisons:
These programs are relatively unique and it is difficult to find other programs with which to make direct comparisons. As a general rule, programs with administrative costs of less than 5% of grant or contract amounts are considered efficient. For example, envisioning a very low overhead operation through efficiency and reliance on outside agency staff, the enabling statutes for the Denali Commission include a 5% cap on administrative funding.

Background and Strategies:
The goal is to manage operating costs through efficiencies in how the division manages water, sewer and solid waste grant projects. The primary strategies for improving efficiency are:

- to increase the use and role of private companies in managing projects; and
- to streamline internal operations by improving data systems and administrative procedures.
-

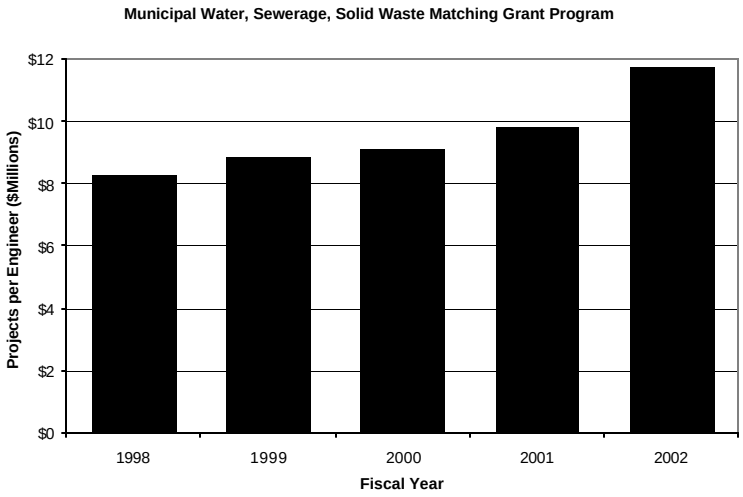
Measure:
The number and cost of sanitation projects per division engineer.
Sec 67 Ch 90 SLA 2001(HB 250)

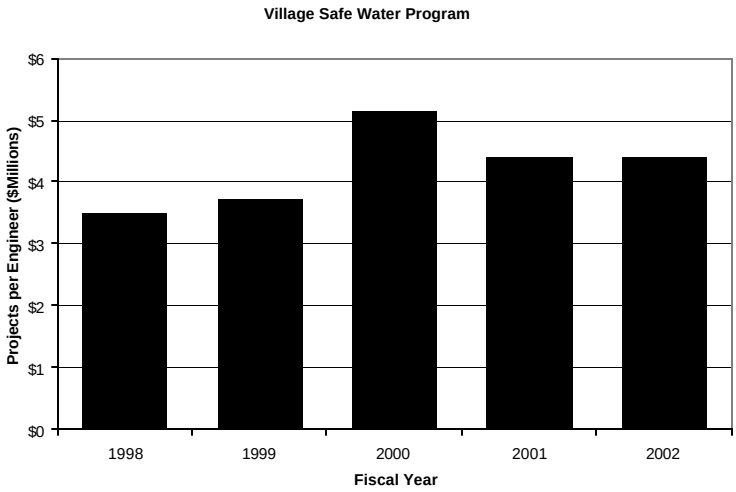
Alaska's Target & Progress:
The goal of the Division of Facility Construction and Operation is to manage workload at, or above, 4 million per

engineer in the Village Safe Water program and 8 million per engineer in the Municipal Water, Sewerage and Solid Waste Matching Grant program.

Between 1998 and 2002, the value of projects managed by the engineers of the Municipal Water, Sewerage and Solid Waste Matching Grant program steadily increased from just over 8 million per engineer to almost 12 million per engineer. This trend is due to increased project funding and a steady staffing level. For the same reason, Village Safe Water project funding per engineer has increased from 3.5 million in 1998 to almost 4.5 million in 2001 and 2002.

In terms of numbers of projects per engineer: Between 1998 and 2002, the average number of Municipal Water, Sewerage and Solid Waste Matching Grant projects managed by each program engineer varied between a low of 10.0 (in 1999) and a high of 14.5 (in 2001), with a 2002 level of 11.0 projects per engineer. In the Village Safe Water program, the number of projects per engineer varied from a low of 4.3 (in 1999) to a high of 6.0 (in 2000) with a 2002 level of 5.2 projects per engineer.





Benchmark Comparisons:
External comparisons not available.

Background and Strategies:
Of the two parts contained in this performance measure -- the number of sanitation projects per engineer and the cost of sanitation projects per engineer -- the cost of projects per engineer is a far better workload indicator. The workload associated with a given number of projects can vary substantially depending on project size. Project funding, on the other hand, incorporates variations in project size into the measure.

to increase the use and role of private companies in managing projects; and
- to streamline internal operations by improving data systems and administrative procedures.
-

Measure:
The cost per household served.
Sec 67 Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:
The goal of the Division of Facility Construction and Operation is to manage capital costs to strike an appropriate balance between capital cost, operating cost, level of service, and system robustness and life expectancy.

Last year a baseline was developed using data on the total state and federal investment in 11 projects completed between 1983 and 2000. Costs included total system development costs starting with water source development and ending with in-home running water and sewer. The average capital cost to develop a water source; provide treatment and distribution systems; and to project wastewater collection, treatment and discharge on a per household basis was calculated at 67,627. Since then, the database used to calculate a baseline cost per household served has been expanded to include total service costs in 25 communities. As a result of that effort, the baseline cost per household served has been revised slightly to 65,574.

Benchmark Comparisons:
A comparable analysis of the cost of providing water and sewer utilities in urban Alaska suggests that the average cost there is about one-half that in rural Alaska. This effect is the result of the high costs of construction in remote locations as well as the diseconomies of scale associated with developing utilities for relatively small numbers of customers.

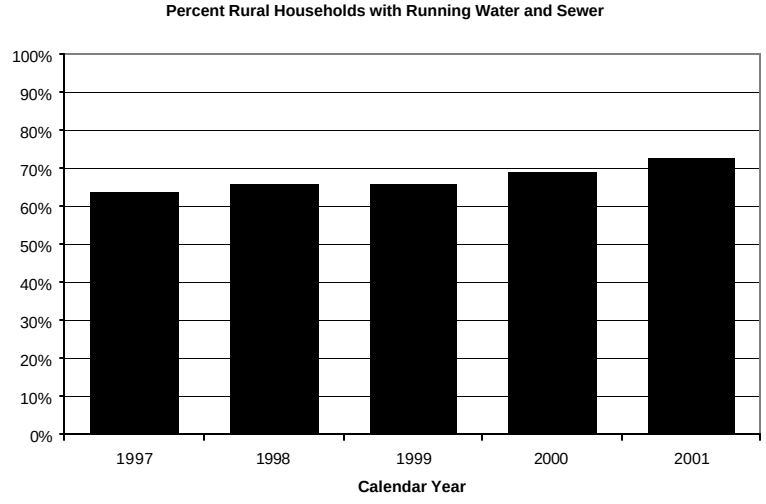
Background and Strategies:
The primary strategies for managing per household costs for water and sewer systems are:

to increase use of enclosed haul and other innovative systems where piped utilities are exceedingly expensive;
- to provide incentive for controlling costs in the competitive grant process by awarding more points to projects that
- are less expensive;
to assert cost control and value engineering as a primary objective throughout project planning and development.
-

Measure:
The percentage of households with improved sanitation systems.
Sec 67 Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:
The goal of the Division of Facility Construction and Operation is an average 4 percent annual increase in the number of rural households with access to running water and sewer systems.

The percentage of rural households with access to running water and sewer increased 4 percent in the last year growing from 69 percent in 2000 to 73 percent in 2001.



The primary strategies for accomplishing the goal of bringing running water and sewer to rural households are:

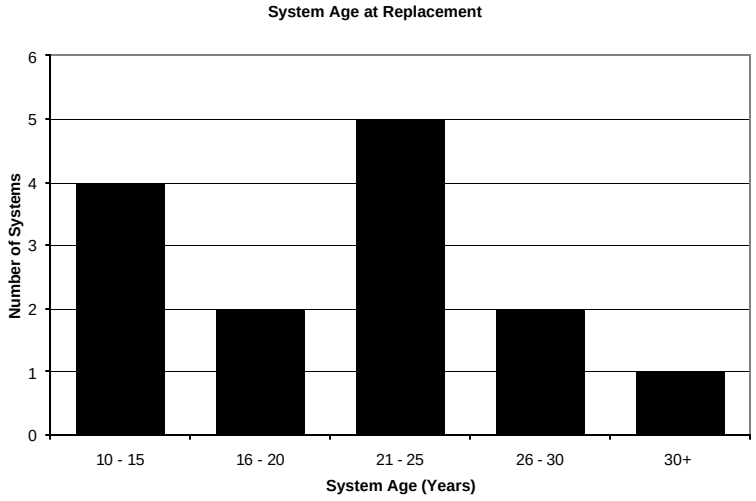
- to secure federal grant funds for rural sanitation projects;
- to make grants to rural communities with capacity to operate and maintain sanitation utilities for design and
- construction of water and sewer systems; and
- to work directly with rural communities to plan and construct water and sewer systems that can be operated and maintained locally.

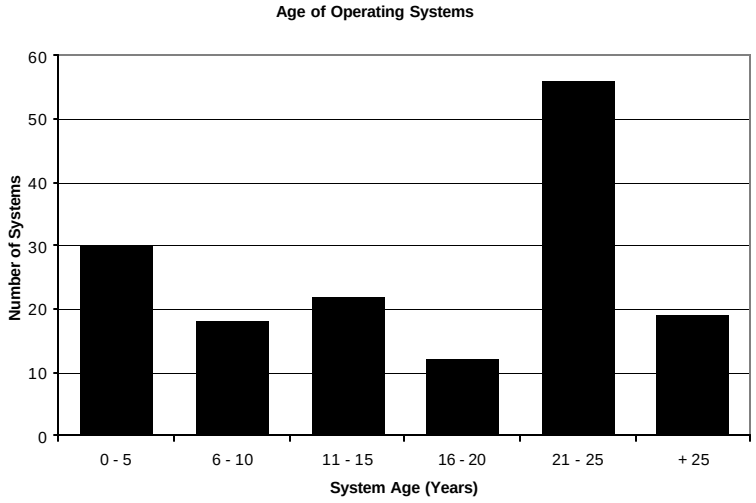
Measure:
The actual life cycle cost compared to the design life cycle cost per year.
Sec 67 Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:
It is the goal of the Division of Facility Construction and Operation that rural sanitation facilities meet life cycle cost targets based on a 20-year design life.

Since the early 1960's, 14 community sanitation facilities -- largely water treatment facilities -- have been replaced in rural Alaska. Eight facilities were 21 years old or older at the time of replacement. The remaining six were replaced within 20 years of construction. Designs and construction practices have improved significantly since the 1960's and 70's. Facilities constructed more recently should significantly outlast those constructed earlier.

A frequency distribution of the age of 157 operating rural sanitation facilities shows that nearly half are 21 years old or older. The number of facilities meeting or exceeding a 20-year design life is expected to increase with time as more and more facilities pass the 20-year mark.





Benchmark Comparisons:

A 20- to 30-year design life is the industry norm for water treatment facilities. Due to extreme operating conditions, facility life expectancy in rural Alaska suggests adopting a design life at the shorter end of the range.

Background and Strategies:
The primary strategies for managing system longevity are:

- to continue to use the Remote Maintenance Worker program to assist communities with preventive maintenance and thereby extending the lives of existing systems; and
- to assert the division's remote maintenance workers' and engineers' arctic experience and expertise throughout project planning and development of new projects to optimize the life expectancy under what are often severe operating conditions.

Facility Construction and Operations

Component Financial Summary

All dollars in thousands

	FY2001 Actuals	FY2002 Authorized	FY2003 Governor
Non-Formula Program:			
Component Expenditures:			
71000 Personal Services	2,347.7	2,615.1	2,679.4
72000 Travel	256.7	314.4	329.4
73000 Contractual	726.5	1,211.5	1,216.5
74000 Supplies	33.4	70.6	70.6
75000 Equipment	46.7	51.5	51.5
76000 Land/Buildings	0.0	0.0	0.0
77000 Grants, Claims	1,123.3	1,523.3	1,503.3
78000 Miscellaneous	0.0	0.0	0.0
Expenditure Totals	**4,534.3**	**5,786.4**	**5,850.7**
Funding Sources:			
1002 Federal Receipts	1,140.4	1,658.5	1,660.6
1003 General Fund Match	616.6	620.1	620.5
1004 General Fund Receipts	349.5	355.6	365.0
1005 General Fund/Program Receipts	43.8	57.2	57.2
1053 Investment Loss Trust Fund	2.8	0.0	0.0
1061 Capital Improvement Project Receipts	1,588.6	2,105.0	2,142.8
1075 Alaska Clean Water Loan Fund	373.6	462.8	469.4
1100 Alaska Drinking Water Fund	418.2	527.2	535.2
1108 Statutory Designated Program Receipts	0.8	0.0	0.0
Funding Totals	**4,534.3**	**5,786.4**	**5,850.7**

Estimated Revenue Collections

Description	Master Revenue Account	FY2001 Actuals	FY2002 Authorized	FY2002 Cash Estimate	FY2003 Governor	FY2004 Forecast
Unrestricted Revenues						
None.		0.0	0.0	0.0	0.0	0.0
Unrestricted Total		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Restricted Revenues						
Federal Receipts	51010	1,140.4	1,658.5	1,658.5	1,660.6	1,660.6
General Fund Program Receipts	51060	43.8	57.2	57.2	57.2	57.2
Statutory Designated Program Receipts	51063	0.8	0.0	0.0	0.0	0.0
Capital Improvement Project Receipts	51200	1,588.6	2,105.0	2,105.0	2,142.8	2,142.8
Restricted Total		**2,773.6**	**3,820.7**	**3,820.7**	**3,860.6**	**3,860.6**
Total Estimated Revenues		**2,773.6**	**3,820.7**	**3,820.7**	**3,860.6**	**3,860.6**

Facility Construction and Operations

Proposed Changes in Levels of Service for FY2003

No service changes.

Summary of Component Budget Changes

From FY2002 Authorized to FY2003 Governor

All dollars in thousands

	General Funds	Federal Funds	Other Funds	Total Funds
FY2002 Authorized	**1,032.9**	**1,658.5**	**3,095.0**	**5,786.4**
Adjustments which will continue current level of service:				
-Year 3 Labor Costs - Net Change from FY2002	9.8	2.1	52.4	64.3
FY2003 Governor	**1,042.7**	**1,660.6**	**3,147.4**	**5,850.7**

Facility Construction and Operations

Personal Services Information

Authorized Positions			Personal Services Costs	
	FY2002 Authorized	FY2003 Governor		
Full-time	36	36	Annual Salaries	2,095,570
Part-time	0	0	COLA	54,470
Nonpermanent	4	4	Premium Pay	14,192
			Annual Benefits	676,255
			Less 5.67% Vacancy Factor	(161,087)
			Lump Sum Premium Pay	0
Totals	**40**	**40**	**Total Personal Services**	**2,679,400**

Position Classification Summary

Job Class Title	Anchorage	Fairbanks	Juneau	Others	Total
Administrative Clerk II	2	0	1	0	3
Analyst/Programmer II	0	0	1	0	1
Division Director	0	0	1	0	1
Env Eng Associate	1	0	0	0	1
Environ Conserv Mgr I	0	0	1	0	1
Environ Conserv Mgr II	1	0	0	0	1
Environ Conserv Mgr III	0	0	1	0	1
Environ Engineer I	1	0	0	0	1
Environ Engineer II	1	0	1	0	2
Environmental Spec I	0	0	1	0	1
Environmental Spec III	0	0	1	0	1
Environmental Spec IV	0	0	1	0	1
Graduate Intern I	3	0	0	0	3
Grants Administrator I	1	0	0	0	1
Grants Administrator II	0	0	1	0	1
Maint Spec Bfc Foreman	1	0	0	0	1
Maint Spec Bfc Jrny II/Lead	2	0	1	0	3
Planner III	0	0	1	0	1
Prog Coordinator	0	0	1	0	1
Project Asst	0	0	1	0	1
Student Intern I	1	0	0	0	1
VSW Engineer I	4	0	0	0	4
VSW Engineer II	3	0	0	0	3
VSW Engineer III	1	0	0	0	1
VSW Engineering Assoc	3	0	0	0	3
VSW Engineering Asst	1	0	0	0	1
Totals	**26**	**0**	**14**	**0**	**40**